

REMARKS

INTRODUCTION

In view of the foregoing, reconsideration of the allowability of all pending claims is respectfully requested.

Claims 1-25 are pending and under consideration, with claims 1-5 and 15-25 being allowed and claims 6-10 being indicated as including allowable subject matter, but stand objected to for being repetitive of claims 1-5.

OBJECTION TO THE ABSTRACT

The Abstract has been amended, as requested by the Examiner. Therefore, it is respectfully requested that this objection be withdrawn.

OBJECTIONS TO CLAIMS 6-10

Claims 6-10 stand objected to for being substantial duplicates of claims 1-5. However, it is respectfully submitted that the breadth of claims 1-5 is sufficiently different from the breadth of claims 6-10.

Claims 1-5 are directed toward a media manipulation apparatus, while claims 6-10 are directed toward a media sensing apparatus. The present application, in at least paragraph [0037], sets for exemplary differences between media manipulation devices and media sensing apparatuses. Accordingly, while the two claimed apparatuses may have overlapping breadth, there potentially would be devices that claims 1-6 would read on that claims 6-10 may not read on, and there potentially would be devices that claims 6-10 would read on that claims 1-5 may not read on.

In addition, it is noted that, according to MPEP §2111.02, if functional features recited in the preamble give life to the claimed invention or thereby limit the structure, then the claimed features must be given sufficient weight, searched, and addressed in any rejection of the claim. Thus, since the present application provides support for differentiating a media sensing device from a media manipulation device, it is respectfully submitted that claim features in the respective preambles are sufficiently differing to require concurrent review.

Therefore, it is respectfully requested that this objection be withdrawn.

REJECTION UNDER 35 USC 103

Claims 11-14 stand rejected under 35 USC 103(a) as being obvious over Dearth et al., U.S. Patent No. 4,159,874. This rejection is respectfully traversed.

By way of review and as an example, independent claim 11 sets forth a media type detector, comprising a specular light sensor and a first light sensor.

In addition, "the first light sensor has a higher light flux capability compared to the specular light sensor, such that, upon an illumination of a media, a signal ratio of a detected specular light sensor intensity and a detected first light sensor intensity is determinative of a media type of the media."

The outstanding Office Action sets forth that Dearth et al. discloses all the claimed features except for the claimed first light sensor having a higher light flux capability, which the Office Action indicates to be an obvious modification. Applicants respectfully disagree.

Initially, it is first noted that the Office Action has particularly interpreted reflective sensor 11 of Dearth et al. to correspond to the claimed specular light source, and has particularly interpreted transmitting light sensor 12 to correspond to the claimed first light sensor.

However, it is noted that reflective sensor 11 is not a specular light sensor. The light source in reflective sensor 11 is oriented at an angle to the aperture opening, while the actual detector to detect reflected light is oriented normal to the aperture opening. Thus, reflective sensor 11 is not a specular light sensor, but rather a diffuse light sensor. Reflective sensor 11 will be detecting diffuse light reflecting off material passing across the aperture opening.

Thus, since the Office Action has relied upon reflective sensor 11 being the claimed specular light sensor, in arguing the obviousness of Dearth et al. having reflective sensor 11 having a lower light flux capability, and as reflective sensor 11 cannot be interpreted as the claimed specular light sensor, the outstanding obviousness rejection is no longer appropriate.

In addition, the Office Action further bases the obviousness rejection on the differences in respective aperture widths of reflective sensor 11 and transmitting sensor 12. Specifically, Dearth et al. sets forth that the aperture window for reflective sensor 11 is 1/16" narrower than the aperture window for transmitting sensor 12. From the aperture window of reflective sensor 11 being narrower than the aperture window of transmitting sensor 12, the Office Action concludes that reflecting sensor 11 will have a lower light flux capability than the transmitting sensor 12.

However, as illustrated in FIG. 3 of Dearth et al., the relevant light source for both reflecting sensor 11 and the transmitting sensor 12 is in reflecting sensor 11. Thus, light is illuminated from the body of reflecting sensor 11, through the aperture window of reflecting sensor 11, through the aperture window for transmitting sensor 12, into the body of transmitting sensor 12. Light detectors in each of reflecting sensor 11 and transmitting sensor 12 thereby detect the illuminated light to detect the respective reflected and transmitted light. That being the case, regardless of the size of the aperture window for transmitting sensor 12, transmitting sensor 12 will always only get the amount of light permitted by the aperture window for reflecting sensor 11. Thus, the differences in radii of the two aperture windows is not relevant to the light flux capabilities of reflecting sensor 11 and transmitting sensor 12.

With the differences in radii of the two aperture windows not being relevant to the light flux capabilities, there would not have been any rationale to infer that light flux capability of reflecting sensor 11 would be lesser, or for that matter greater, than transmitting sensor 12.

Therefore, it is respectfully submitted that it would not have been obvious to modify Dearth et al., or to infer therefrom, that such a modification or inference would disclose or suggest the claimed feature of a flux capability of a specular light sensor being less than the claimed first light sensor.

In view of at least the above, it is respectfully requested that rejections to claims 11-14 be withdrawn and claims 11-14 be allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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